(3) Test Option 3: Use Otto-cycle test fuel as specified in the table in § 86.113–94(a)(1).

§§ 86.1414–86.1415 [Reserved]

§ 86.1416 Calibration; frequency and overview.

(a) Calibrations are performed as specified in § 85.2233 of this chapter, with the exception that the calibrations performed at 72 hour intervals in § 85.2233(e) of this chapter are instead performed prior to each CST.

(b) At least monthly, or after any maintenance which could alter calibration, the calibration of the analyzer must be checked. The analyzer must be adjusted or repaired as necessary.

(c) Water traps, filters, and conditioning columns must be checked before each test, and adjusted, repaired or replaced as necessary.

(d) Other equipment used for testing must be calibrated as often as necessary in accordance with good engineering practice.

§§ 86.1417–86.1421 [Reserved]

§ 86.1422 Analyzer calibration.

(a) Determine that the analyzer has met the acceptance criteria specified in § 85.2225 of this chapter.

(b) *Initial and periodic check.* Prior to its introduction into service and at specified periods thereafter, the analyzer must receive calibration in accordance with § 85.2233 of this chapter and with good engineering practice.

§§ 86.1423–86.1426 [Reserved]

§ 86.1427 Certification Short Test procedure; overview.

(a) The test procedure described in this subpart is designed to measure raw concentrations of CO (percent) and HC (parts per million) in the exhaust flow under conditions and test modes that may be encountered in the conduct of the Emission Control System Performance Warranty Short Tests, described in part 85, subpart W of this chapter. Emission sampling may occur during idle, 2500 rpm, and loaded modes. Specific conditions defined by this test procedure include fuel characteristics, ambient temperature, and waiting periods prior to being tested.

(b) *Testing by the manufacturer for certification data submittal.* (1) The options provided for testing under this subpart include a cold temperature test with Cold CO fuel, a moderate temperature test with Cold CO fuel, and a warm temperature test with FTP Otto-cycle test fuel, as described in table O–96–1 of § 86.1430. The manufacturer must complete testing for the data submittal (as required by the provisions of § 86.096–23(c)) under a minimum of one of these scenarios.

(2) In addition to testing under one of the sets of conditions specified in this subpart, the manufacturer may optionally test under conditions outside the ranges specified in this subpart.

(c) *Testing by the Administrator.* The Administrator reserves the right to conduct testing in accordance with the test procedures described in § 86.1439, under test conditions within the ranges specified in this subpart. The options provided for testing under this subpart include a cold temperature test with Cold CO fuel, a moderate temperature test with Cold CO fuel, a moderate temperature test with Otto-cycle test fuel, and a warm temperature test with Otto-cycle test fuel, as described in table O–96–2 of § 86.1430. In order for an engine family to be eligible for certification, each of its test vehicles that is subjected to one or more CSTs must obtain a passing result for each combination of fuel, temperature, and test procedure employed in those CSTs, subject to the Administrator's discretion.

(d) *Alternative test procedures and exemptions.* (1) The manufacturer may request an exemption from any specific test(s) described in § 86.1439 for any engine family for which the specific test(s) is not appropriate. The requester will supply relevant test data and technical support to substantiate the request for an Administrator-granted exemption.

(2) The manufacturer may request alternative test procedures for any engine family for which none of the test procedures described in § 86.1439 is appropriate. The alternative test procedure(s) must be approved in advance by the Administrator in accordance with the provisions of § 85.2208 of this chapter.